ABSTRACT

An arbiter device for a multi-port memory is provided that includes an identical

address detection circuit , an OR gate circuit, a D-type flip-flop, a buffer, and a selector.

The identical address detection circuit can detect if input addresses to two ports of a

5   multi-port memory are identical with each other. The selector outputs output data on the

write port and output data on the read port. When an input address to the A port of the

multi-port memory is identical with an input address to the B port thereof, the operation

of the B port is stopped, and data on the A port is selected and output, such that

simultaneous accesses to the same address can be made.   As such, an arbiter device for a

10   multi-port memory can be provided that enables simultaneous accesses to the same

address when an input address to a first port of a multi-port memory and an input address

to a second port of the multi-port memory are identical.